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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/552,818	04/20/2000	Limor Schweitzer	XACTP015	3448

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EXAMINER

THOMPSON, MARC D

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 02/12/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/552,818

Applicant(s)  
Schweitzer et al.

Examiner  
Marc Thompson

Art Unit  
2142



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Dec 5, 2001
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Apr 20, 2000 is/are a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 5,6 6) ☐ Other:

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### **DETAILED ACTION**

1. This application has been examined.
2. Claims 1-19 are pending.

#### ***Priority***

3. This application claims priority to provisional application 60/141,351.
4. The effective filing date for the subject matter defined in the pending claims in this application is 6/28/1999.

#### ***Information Disclosure Statement***

5. The information disclosure statements filed 2/15/2001 (Paper #5) and 6/15/2001 (Paper #6) contain a duplicate entry, WO99/27556, which has only been considered once. The other entry of this WO patent has been omitted from the submitted IDS.
6. IDS Paper #6, cites two pieces of non-patent literature that is not present in the application file. Further, there is insufficient detail to locate these documents. These entries have been omitted from consideration, and Applicant is encouraged to resubmit these documents, with proper citations, on a supplemental IDS.

#### ***Drawings***

7. The Examiner contends that the submitted drawings are acceptable for examination.

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***Claim Objections***

8. Claims 11 and 13 are objected to because of the following informalities:

Claims 11 and 13 fail to terminate, i.e., there is no terminating period.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 20-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. The claims, title, abstract, and specification use the term “session reconstruction” without providing adequate definition to determine the metes and bounds of what this limitation includes. Commensurate with the specification, the definition of “session” is relatively clear (Page 9, Lines 11-24), but the operation of the described “reconstruction system(s)” is vague and remains open to multiple interpretations when portraying functionality drawn to “session reconstruction”. Thus, the use of this limitation in the claims is held indefinite since the term does not directly impart any specifically defined behavior or functionality. For examination purposes, “session reconstruction” will be treated as the gathering of information about the session, and the

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analyzing of this gathered information in order to monitor or account a specific flow (session), or sets of flows (sessions), of network information. See, for example, present specification, Page 18, Line 11 through Page 20, Line 12.

***Claim Rejections - 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

13. Claims 1, 3-5, 10-13, 15, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Chiu et al (U.S. Patent Number 5,101,402), hereinafter referred to as Chiu.

14. Chiu disclosed a system and method for real-time monitoring of software sessions by analyzing packets transmitted on the network using session identifiers in packets header(s), statistical gathering of session flow characteristics on the network, and preparation of gathered information in specific formats. See, inter alia, Abstract, Column 4, Line 59 through Column 5, Line 41, and Column 6, Lines 53 through Column 7, Line 14. In short, Chiu disclosed definition of a "session" format (Fig. 14) which was used to discern network packet traffic to monitor sessions of software/applications on the network.

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15. Chiu expressly disclosed the invention set forth in claims 1, 3-5, 10-13, 15, and 19, as follows:

(claim 1, 15, 19)

a. *Receiving a plurality of packets over a network interface*, was taught by Chiu, inter alia, in Column 6, Lines 41-43.

b. *Analyzing the plurality of packets to identify at least a first flow*, was taught by Chiu, inter alia, in Column 8, Lines 5-9.

c. *Identifying an application for the [] flow*, was taught by Chiu, inter alia, in Column 9, Lines 29-32.

d. *Selecting a corresponding application flow identifier for the application*, was taught by Chiu, inter alia, in Column 9, Lines 26-32.

e. *Using the corresponding application flow identifier to identify a plurality of flows in the plurality of packets corresponding to the session*, was taught by Chiu, inter alia, in Column 5, Lines 31-41, and Column 11, Lines 4-27.

(claim 3)

f. *Session is associated with an end user experience occurring within a definite time bound*, was taught by Chiu in Column 11, Lines 28-44.

(claim 4)

g. *Session comprised of one or more additional sessions*, was taught by Chiu, inter alia, in Column 10, Line 64 through Column 11, Line 1. The described “session packets”, included

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“initiator\_connect\_packets” and “target\_connect\_packets” (Figure 14), providing multiple subsessions in a defined session set forth by the session record in Figure 14. Also see Column 2, Lines 39-48.

(claim 5)

h. *Filtering packets received over the network interface prior to the analyzing, the filtering comprising removing one or more packets according to one or more packet capture language rules*, was taught by Chiu, inter alia, in Column 6, Lines 56-64, and Column 7, Lines 24-35.

(claim 10)

i. *A packet source generating a plurality of packets*, was taught by Chiu, inter alia, in Column 5, Lines 36-37.

j. *A flow manager coupled to the packet source, the flow manager identifying at least one flow in the plurality of packets*, was taught by Chiu, inter alia, in Column 5, Lines 36-37.

k. *An application recognizer coupled to the flow manager, the application recognizer identifying an application corresponding to the [] flow*, was taught by Chiu, inter alia, in Column 5, Lines 36-37.

l. *A session streamer coupled to the flow manager, the session streamer identifying a plurality of flows in the plurality of packets corresponding to the session based on the application*, was taught by Chiu, inter alia, in Column 5, Lines 38-41, and Column 10, Line 64 through Column 11, Line 1. The described “session packets”, included

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“initiator\_connect\_packets” and “target\_connect\_packets” (Figure 14), providing multiple subsessions in a defined session set forth by the session record in Figure 14. Also see Column 2, Lines 39-48.

(claim 11)

m. *Each of the packets includes a plurality of header elements and the [] flow includes one or more packets with a common packet header element*, was taught by Chiu, inter alia, in Column 5, Lines 34-41.

(claim 12)

n. *Application recognizer can identify at least one of...FTP, HTTP, SMTP, DNS,...*, was taught by Chiu, inter alia, in Column 7, Lines 31-33.

(claim 13)

o. *Application recognizer signals to the session streamer to treat the at least one flow as a session when the application recognizer cannot identify an application for the [] flow*, was taught by Chiu, inter alia, in Column 9, Lines 26-32.

Claims 1, 3-5, 10-13, 15, and 19 are rejected.

16. Claims 1-5, 7, 10-13, 15-16, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by McCreery et al. (U.S. Patent Number 5,787,253), hereinafter referred to as McCreery.



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17. McCreery disclosed a system for analyzing network activity by examining transient packets, determining and storing transactional data, and generation of reports regarding network and application efficiency, utilization, and usage. See Column 2, Lines 8-67. McCreery disclosed the invention as broadly claimed.

(claim 1, 15, 19)

a. *Receiving a plurality of packets over a network interface*, was taught by McCreery in Column 4, Lines 19-34.

b. *Analyzing the plurality of packets to identify at least a first flow*, was taught by McCreery in Column 7, Lines 33-50.

c. *Identifying an application for the [ ] flow*, was taught by McCreery in Column 7, Lines 33-40. Also see, inter alia, Column 8, Lines 55-65.

d. *Selecting a corresponding application flow identifier for the application*, was taught by McCreery in Column 11, Lines 3-57.

e. *Using the corresponding application flow identifier to identify a plurality of flows in the plurality of packets corresponding to the session*, was taught by McCreery in Column 11, Lines 3-57.

(claim 2, 16)

f. *Generating a quality of service report for the session based on the application*, was taught by McCreery in Column 5, Lines 36-57, and Column 6, Lines 26-47.

(claim 3)

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g. *Session is associated with an end user experience occurring within a definite time bound*, was taught by McCreery in Column 5, Lines 48-57

(claim 4)

h. *Session comprised of one or more additional sessions*, was taught by McCreery in Column 14, Lines 42-62. Also see Column 13, Lines 52-56.

(claim 5)

i. *Filtering packets received over the network interface prior to the analyzing, the filtering comprising removing one or more packets according to one or more packet capture language rules*, was taught by McCreery in Column 14, Lines 4-41.

j. *Sending a command to a network device to control the session based on a policy*:

(claim 7)

i. *The policy defining a quality of service for the application*, was taught by McCreery in Column 5, Lines 44-57, and Column 8, Lines 1-9.

(claim 10)

k. *A packet source generating a plurality of packets*, was taught by McCreery in Column 4, Lines 4-18.

l. *A flow manager coupled to the packet source, the flow manager identifying at least one flow in the plurality of packets*, was taught by McCreery in Column 5, Lines 1-10.

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m. *An application recognizer coupled to the flow manager, the application recognizer identifying an application corresponding to the [] flow, was taught by McCreery in Column 10, Lines 20-64.*

n. *A session streamer coupled to the flow manager, the session streamer identifying a plurality of flows in the plurality of packets corresponding to the session based on the application, was taught by McCreery in Column 10, Line 51 through Column 11, Line 2.*

(claim 11)

o. *Each of the packets includes a plurality of header elements and the [] flow includes one or more packets with a common packet header element, was taught by McCreery in Column 10, Lines 20-50.*

(claim 12)

p. *Application recognizer can identify at least one of...FTP, HTTP, SMTP, DNS,..., was taught by McCreery, inter alia, in Column 10, Lines 20-50, and Column 14, Lines 30-32.*

(claim 13)

q. *Application recognizer signals to the session streamer to treat the at least one flow as a session when the application recognizer cannot identify an application for the [] flow, was taught by McCreery in Column 9, Lines 29-49.*

Since McCreery disclosed all the limitations set forth in claims 1-5, 7, 10-13, 15-16, and 19, these claims are rejected.

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***Claim Rejections - 35 USC § 103***

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

20. Claims 6, 8-9, 14, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCreery as applied above, in view of Ronen (U.S. Patent Number 5,845,267), hereinafter referred to as Ronen.

21. McCreery disclosed the invention substantially as claimed as detailed in the above rejection. McCreery failed, however, to disclose any mechanism(s) to bill network users for use of specific services available on the network. The provision for the billing of network services by the network owner (or more likely, some intermediate re-seller) was well known in the art at the time of invention. The issue of cost was an inherent concern of the ordinary artisan at the time of invention, since any transactional request as set forth in McCreery was using network and computer resources, including bandwidth and server processing power. Since billing for network

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services was well known, and billing for transactional data was well known, an artisan would have been motivated to search the network services billing arts for suitable billing mechanisms for simple, seamless modification of the McCreery system which would have resulted in an accurate billing system for clients accessing network services.

22. In these arts, Ronen disclosed a system and method for billing for network transactions. See Title. The system utilized a session manager to identify information flows for particular users, and used a billing platform to bill those users for network application/service usage. See Abstract. Thus,

(claim 6)

a. *Outputting a plurality of service detail records at predetermined intervals for the application, each service detail record including a billing identifier and a usage information,* was taught by Ronen in Column 7, Lines 15-20.

b. *Usage information derived from the number of packets in the session during the corresponding predetermined interval,* was substantially taught by Ronen in Column 10, Lines 20-50, and Figure 6. In this section, Ronen disclosed each individual packet being accounted, sorting/filtering/segregating packets according to session, and open-ended alternative sorting and grouping techniques. Since the number of packets was known to the system, and each packet designates usage of a particular resource, the use of the number of packets to indicate usage would have been obvious to one of ordinary skill in the art provided with the teachings of McCreery and Ronen.

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c. *Sending a command to a network device to control the session based on a policy:*

(claim 8, 17)

i. *The policy defining the amount of resources available to the session, was taught by Ronen in Column 8, Lines 4-10.*

(claim 9)

ii. *The policy specifying a cost for use of resources and the policy triggering the transmission of the [stop] command upon the cost exceeding a predetermined amount, was taught by Ronen in Column 8, Lines 4-10.*

(claim 14)

d. *A data collector coupled to the session streamer, the data collector for producing service detail records at predetermined intervals for the application corresponding to the session, each service detail record including a billing identifier and a usage information, was taught by Ronen in Column 7, Lines 15-20. Also see Column 7, Lines 6-43.*

(claim 18)

e. *Charging at least one account for resources used during the session, was taught by Ronen in Column 8, Lines 24-29.*

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the monitoring system for network resources of McCreery with the billing system for network resources by Ronen, to result an accurate billing system for the usage of available network resources.

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Since all the claimed limitations set forth in claims 6, 8-9, 14, and 17-18 were disclosed by the combination of McCreery and Ronen, these claims are rejected.

23. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over “Rich Data About customer Usage” (Narus’ semantic traffic analysis), written by Bill Roberts for Internet World, v5, n10, p27, published 3/15/1999, hereinafter referred to as Roberts, in view of “Narus and Portal Join to Provide Internet service Providers Full Customer Management and Billing Solutions; Alliance creates Solution Suites for ISPs to Build Service-Driven Businesses”, Business Wire, 3/16/1999, hereinafter referred to as Business Wire, further in view of “NARUS Intelligence”, February 1999, product detail sheet, digitally dated 2/18/1999, hereinafter referred to as Narus Intelligence.

24. Roberts disclosed “semantic traffic analysis” which allowed an ISP to capture and analyze (“sniff”) packets in order to gather information about application level and customer usage of the network, including IP telephony, e-mail, application usage, multimedia streaming, and any other IP service. The system was equipped to track user behavior during sessions. The system further allowed customers to receive “billing information that’s as specific as a telephone bill”, i.e., itemized. Thus, Roberts disclosed reception of packets on the network, analyzing the packets and flows to identify sessions, identification of application(s) associated with the session, identification of the user associated with the session, and appropriate billing for usage of network

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resources. Policy determination was implicitly disclosed, since customers were billed a determined amount in exchange for services and the system offered itemized, discrete billing information. Thus, generation of reports including billing information were also disclosed. Filtering of packets unrelated to the session was inherent, since discerning of the session itself provided this. In short, the system “measure customers’ usage of applications and charge[d] them appropriately”, by “sniff[ing] network traffic”, using “[a] number of probes required [depending] on the size and geographical reach of the network.”

An artisan working with the Roberts (Narus) system would have been motivated to search for further teachings in the same art, dealing directly with this system and the underlying technology. In these arts, Business Wire disclosed an alliance between Narus and Portal, which resulted in “comprehensive and flexible customer management and billing solutions” which “capture[d] real-time, comprehensive network and application-level customer usage information directly from IP networks” by “capturing all customer usage activity.” Thus, provision for packet analyzing, session reconstruction, identification of particular applications/services, billing for application events according to a general policy, and output of reports including the billing information were all disclosed.

Further, the product information available concerning Narus (Narus Intelligence) disclosed a list of reports available for output. It should be noted that any generated report assumedly used gathered, accurate information. Among this reported information includes, inter alia, connection times, application usage, QoS measurements, and packet counts. Likewise, all



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the application information gathered was associated with an arbitrary network resource cost, which directly resulted in billing of users for use of the reported applications.

Combination of these teachings would have been obvious to one of ordinary skill in the art at the time the invention was made, since all of them deal directly with the same product and manufacturing company, Narus. This was one possible array of teachings dealing with a single, particular product and set of services.

The claimed invention was described by the general teachings set forth in Roberts and Business Wire and Narus Intelligence, and an ordinary artisan would have been able to construct the claimed invention from these teachings without undue experimentation. Thus, since the claimed invention was disclosed, claims 1-19 are rejected.

### ***Conclusion***

25. As a general matter, not only the specific teachings of a reference but also reasonable inferences which an artisan would have logically drawn therefrom may be properly evaluated in formulating a rejection. *In re Preda*, 401 F.2d 825, 159 USPQ 342 (CCPA 1968) and *In re Sherpard*, 319 F.2d 194, 138 USPQ 148 (CCPA 1963). Skill in the art is presumed. *In re Sovish*, 769 F.2d 738, 226 USPQ 771 (Fed. Cir. 1985). Furthermore, artisans must be presumed to know something about the art apart from what the references disclose. *In re Jacoby*, 309 F.2d 738, 226 USPQ 317 (CCPA 1962). The conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or

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suggestion in a particular reference. *In re Bozek*, 416 F.2d 738, 1385 USPQ 545 (CCPA 1969). Every reference relies to some extent on knowledge of persons skilled in the art to complement that which is disclosed therein. *In re Bode*, 550 F.2d 656, 193 USPQ 545 (CCPA 1977). The above rejections assume ordinary knowledge and well known functionality in the field of computer networking. Motivation for obtaining and incorporating related technologies, and resulting modification(s) of any/all disclosed subject matter in the above rejections would have been reasonable to one of ordinary skill in the art at the time the invention was made.

26. Applicant employs broad language which includes the use of words and phrases which have broad meanings in the art, inter alia, “flows”, “session”, “policy”, and “quality of service”. It is suggested that Applicant argues narrower interpretation of the claim language, or amends the claims significantly enough to construe a narrower meaning to the limitations. As the claims breadth allows multiple interpretations and meanings which are broader than Applicant’s disclosure, the Examiner is forced to interpret the claim limitations as broadly as reasonably possible, in determining patentability of the disclosed invention.

27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. “Serving Up QoS End-to-End”, by Marguerite Reardon, Data Communications, November 1998, pages 25-27, disclosed application layer monitoring which dynamically adjusts traffic policies in response to changing network conditions.

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b. Thandani et al. (U.S. Patent Number 5,648,965) disclosed specifics of packet filtering in network communications.

c. Maccabee et al. (U.S. Patent Number 6,108,700) disclosed and application end-to-end response time measurement (QoS) in a system using session monitoring.

d. Wenig et al. (U.S. Patent Number 6,286,030) disclosed recording and analysis of client-server sessions on a network.

28. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Marc Thompson whose telephone number is (703) 308-6750.

The Examiner can normally be reached on Monday-Friday from 9am to 4pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Mark Powell, can be reached at (703) 305-9703.

The fax phone numbers for the organization where this application is assigned are as follows:

(703) 746-7238	(After Final Communications only)
(703) 746-7239	(Official Communications)
(703) 746-7240	(for Official Status Inquiries, Draft Communications only)

Inquiries of a general nature relating to the general status of this application or proceeding should be directed to the 2100 Group receptionist whose telephone number is (703) 305-3900, or Customer Service for Technology Center 2100 at (703) 306-5631.

**MARC THOMPSON**  
Marc D. Thompson  
Patent Examiner  
Art Unit 2142